NHDOT SPR2 PROGRAM
RESEARCH PROGRESS REPORT

Project # SPR 26962W		**Report Period** Year 2020 ☐ Q1 (Jan-Mar) ☐ Q2 (Apr-Jun) ☐ Q3 (Jul-Sep) X Q4 (Oct-Dec)
Project Title: Log Jam Monitoring		
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Project Start Date: May 1, 2019	**Project End Date:** April 30, 2022	**Project schedule status:** ☐ On schedule ☐ Ahead of schedule X Behind schedule

Brief Project Description:

Extreme bank erosion along Route 16 in Errol is to be stabilized using an engineered log jam (ELJ). This is the first installation of an ELJ by NH DOT, and as such NH DOT is interested in the benefits of the structure pertaining to performance, habitat, and costs. The project shall be monitored for three years, including eight months of pre-construction monitoring and two years of post-construction monitoring. Monitoring activities are to cover hydraulic, structural, flora, and fauna; in addition, the monitoring provides inspection information to DOT to assess any need for maintenance or repairs. The ultimate objective of the project is to document all salient aspects of ELJs relative to road planning, permitting, construction, and maintenance, plus documenting stream system changes resulting from the ELJ.

Progress this Quarter (include meetings, installations, equipment purchases, significant progress, etc.):

When the proposal was written, the original ELJ project construction was planned for summer 2019, however that was pushed back until summer 2020. Road construction started the end of June 2020 and the ELJ construction was pushed back to summer 2021, however recently the contractor indicated log jam construction to start in late-October 2020. The log jam was completed in January 2021. In order to obtain two years of post-construction monitoring, the project end date will need to be extended to April 2023. The additional year of monitoring will require additional funding, and that should be discussed at the next TAG as well as internally in NHDOT. It is recommended to wait on estimating funding needs until the end of the summer 2021 field season.

Efforts accomplished since the last report include: correspondences; review of construction progress reports; collecting and processing of transducer data from four locations; continuing hydraulic modeling simulations; processing previous game camera and underwater video images into files for fish identification by biologists; downloading and maintaining a game camera, and deploying underwater video.

Items needed from NHDOT (i.e., Concurrence, Sub-contract, Assignments, Samples, Testing, etc…):

Nothing at this time.

Anticipated research next three (3) months:

In the next quarter, we plan to: continue modeling efforts; download game camera data from across the river from the ELG and insert an empty SD storage card; deploy underwater GoPro cameras for a few hours; and continue to review the hours of GoPro video to estimate underwater bank fauna. Interpretation of these images could use the assistance of USFW&S and NHF&G TAG members for fish identification.

Circumstances affecting project:

The construction delay affects project timing, aside from the delay in the schedule, having more pre-construction data is actually a good thing as far having a solid pre-construction database with which to compare to post construction data. The UNH COVID shut down did not affect this project.

Budget, scope, and timing are all on schedule.

Tasks (from Work Plan)	Planned % Complete	Actual % Complete
Task 1 Kick off meetings and information gathering	100% complete	100% complete
Task 2 (in the fifth quarter, proceeding as planned)	80%	70%